Mental health care in rural Kenya

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CHAPTER 1

INTRODUCTION

1.1 GENERAL INTRODUCTION

Mental health systems in Low and Middle-Income Countries (LMICs) are often over-burdened in many ways by the limitation of human resources, treatment options, capacity, and infrastructure (Burns and Tomita, 2015). At the same time the global burden of disease of mental illness is on the rise, disproportionally affecting LMICs, where the mental health treatment gap is large (Kohn et al., 2004; Whiteford et al., 2013). In comparison to developed countries, the psychiatrist to patient ratio in developing countries is very low thus preventing adequate treatment for those who need it. This is worsened by the internal and external migration (Jenkins et al., 2010c; Ndetei, 2008) which has concomitantly affected the mental health service provision in various regions. The situation in the rural areas in LMICs is even worse as the trained professionals tend to live in the larger cities with private and referral hospitals, or migrate to urban settings where the minority live (Ndetei, 2008).

Given this inequitable distribution of human resources and reduced access for the rural populations, training of more mental health professionals cannot exclusively increase the delivery of mental health services in remote settings. There have been discussions on how access to mental health services can be increased for the rural poor (Gamm et al., 2010). As such, various programmes in LMICs have suggested strategies that can be adapted to reduce barriers to scaling up mental health services such as the low-budget allocation and scarcity of human and financial resources (Eaton et al., 2011). Importantly, the Lancet series on Global Mental Health has recommended mobilization and recognition of community informal resources and creating collaborative, task-sharing partnerships with Informal Health Providers (IHPs) to ensure access to millions of people in need of mental health services (Saraceno et al., 2007).

IHPs are entrepreneurs who routinely or occasionally undertake activities for which they do not possess a medical certification since they do not have formal training, and collect payment for services provided directly from their patients or from a sponsoring body in form of reimbursement vouchers (Bloom et al., 2011; Sudhinaraset et al., 2013). IHPs such as traditional healers see their patients in shrines and depend on consultation with the ancestral spirits and herbal medication to treat patients with mental disorders. Faith healers on the other hand, use biblical interpretation and prayers for their patients while Community Health Workers (CHWs) conduct home visits through the guidance of the formal health providers. Even though CHWs are a type of IHPs, they are recruited with input from community Health Extension Workers based at the health facilities and

from community members through a *"baraza"* (community elders' meeting). They primarily identify needs, provide psychoeducation and manage some conditions at the family level, then link the patients to health facilities (Rachlis et al., 2016). With the exception of traditional healers, these providers often provide services to the community until they retire. In fact, the older traditional healers are mostly sought for care compared to the younger ones since they are regarded as specialists and assumed to have been practicing for a longer time.

Individuals in LMICs particularly in rural areas often seek mental health services through these alternative pathways of care such as traditional and faith healers (Burns and Tomita, 2015), who seem to appease patients due to social, economic and cultural factors hence making them more favorable and acceptable to the community (Ae-Ngibise et al., 2010). Moreover, IHPs have flexible working hours, are available at nearly all times, accessible geographically and offer more rapid services compared to either the public or formal private sectors (Sudhinaraset et al., 2013). Studies from Africa also show that they play a key role in providing services to a vast number of mentally ill patients (Burns and Tomita, 2015; Chidarikire et al., 2014; Mbwayo et al., 2013) and provide holistic care that involves reduction in bodily symptoms as well as social and psychological reintegration of patients into their communities (Mhame et al., 2010). These practices overlap with those of the formal health providers provided in health care settings.

As a result, prior and recent studies have recommended cooperation between the formal and the informal health sectors on mental health and other areas of care (Audet et al., 2015; Campbell-Hall et al., 2010; Chinsembu, 2009; Kayombo et al., 2007; Mills et al., 2006; Robertson, 2006). In spite of these suggestions, this still seems like a difficult task as IHPs have their reservations related to the reality of past experiences of mistreatment during the colonial period and the tradition of tension between religion and science hence making it difficult to initiate collaboration (Kayombo et al., 2007; Osafo, 2016). Antipathy and mistrust have also been inherent between the two sectors (Blank et al., 2002; Niekerk et al., 2014) with unsuccessful efforts to resolve them. Since this is crucial to forming lasting relationships which result in easier, faster and more coherent access to services (Mattessich and Monsey, 1992), it would be important to address this gap in order to reduce any resistance between the two sectors.

One of the suggested ways to reduce the gap is related to promoting capacity building for IHPs who lack the necessary training to provide basic services for promotion of health outcomes (Sudhinaraset et al., 2013). Prior literature has shown that they are capable of performing at least as well as their biomedical counterparts as counselors if trained (King R and Homsy J., 1997). This

results into their ability to strengthen mental health systems through providing psychoeducation, treating common mental disorders, and detecting and referring individuals to hospitals (Petersen, Lund, & Stein, 2011). A recent meta-synthesis review revealed that educational interventions, including capacity-building training programs for IHPs and process interventions that include building dialogue and understanding, and fostering working relationships between formal and informal health providers are among the top-most cited recommendations for IHPs in various studies (Sudhinaraset et al., 2013).

Notwithstanding these strategies and recommendations, little is known about how to appropriately deal with collaboration challenges as it is not as easy as it appears from literature (Kayombo et al., 2007). Interestingly, both in the developing and developed countries, there is a trend to develop more inclusive health approaches in which biopsychosocial models are integrated with spiritual aspects. In developed countries, the spiritual aspects of patient care have been integrated into the biopsychosocial model (Puchalski et al., 2014) with recommendations to advance the concepts of spiritual care within health care settings (Mcsherry, 2006), in order to assist physicians to understand the patient or family spirituality (Jaul et al., 2014). In LMICs and the World Health Organization reports, the discussion is about integration of the biopsychosocial practices into the spiritual practices of the IHPs through task-sharing approaches in order to overcome the shortages of human resource in resource-limited health care settings.

These developments have opened an opportunity for IHPs to acquire new skills through collaborating with the formal sector. Their willingness to work together relates to the fact that this process might improve the health and quality of life of their patients. Whether this interest is true for specific regions (Campbell-Hall et al., 2010), circumstances need to be investigated. Little research has been done to find out if evidence-based interventions for priority mental disorders such as depression will indeed result into improved quality of life of patients seen by IHPs. Therefore, the research of this thesis aims at answering the question on how exploring the conditions necessary to enhance collaboration between formal and informal health providers will improve the quality of life of IHP patients suffering from mental health related disorders.

Mental Health care in Kenya

Kenya is one of the LMICs that experiences health care worker shortages (Jenkins et al., 2010a; Ndetei et al., 2007), high health care costs and unavailability of appropriate care within a reasonable distance (Turin, 2010), resulting into reduced access to health services for its residents.

Its contribution to health mainly focuses on communicable diseases especially HIV and malaria (Jenkins et al., 2010a) and puts little investment for mental health and mental disorders especially human resources. The less than 100 psychiatrists in Kenya who are mainly in private practice with insignificant numbers in the rural areas serve a population of more than 43 Million. In fact, some rural counties with a population of nearly 1 Million have no psychiatrist and mainly rely on psychiatric nurses based in the outpatient clinics at the sub-county and county hospitals (level 4-5 facilities), who are overwhelmed due to the huge population that relies on their expertise to promote patient recovery.

Other practitioners such as clinical officers and nurses with at least diploma training in general health care provide basic mental health care at levels 2-3 facilities (dispensaries and health centers), for community members who are unable to access the wide-range of services at levels 4 and 5. The number of these practitioners under weigh IHPs at level 1 who comprise a significant component of health systems in developing countries (Sudhinaraset et al., 2013). IHPs have been shown to play a key role in increasing access and delivery of health care in rural and remote settings in Kenya (Marangu et al., 2014; Ochieng et al., 2014; Okonji et al., 2008). One CHW serves about 100 households at the community level with prevention, promotion, identification of health problems, and appropriate interventions such as referral of patients to health care settings for treatment (Jenkins et al., 2010a), while traditional and faith healers collectively serve majority of the rural populations due to their accessibility, affordability, acceptability and availability (Mbwayo et al., 2013). As a matter of fact, these practitioners are commonly referred to as “doctors” in the rural areas (Barnes et al., 2010), since they handle various forms of illnesses including mental disorders.

Given the current treatment gap and the existence of this pool of IHPs and other non-specialists, the World Health Organization (WHO) recommended an extension on the scope of practice for IHPs through task-sharing models so that they take up specific tasks that were previously undertaken by higher cadres such as nurses and clinical officers, with an aim of making more efficient use of the available human resources for health (World Health Organization, 2008a). Ndetei and colleagues have also stated that it may not be possible to achieve a psychiatrist to population ratio in Kenya that is comparable to developed countries, and in order to achieve a realistic mental health service delivery, training of non-specialists (Ndetei et al., 2007) particularly IHPs (Marangu et al., 2014) is required.

It is therefore crucial to integrate mental health in lower levels of care using community-based approaches with a view to increase population access to appropriate mental health care for individuals in resource-limited settings. Targeting IHPs to provide appropriate interventions for patients with common mental disorders could particularly reduce health care provider to patient ratio at the health facility level and serve as a link between undetected mental health needs at the community level and provision of within-reach services. It could also result into fewer numbers of patients with severe mental illnesses at higher levels of care.

The recent launch of the mental health policy in Kenya encourages the participation of IHPs in the care, support and referral of persons with mental illness, and enhances positive socio-cultural practices while deterring negative socio-cultural practices for promotion of mental health. It also provides an opportunity for counties to include mental health in the County Integrated Development Plans, Strategic Plans and Annual Implementation Plans, that will guide mental health operations at the county level (Ministry of Health, 2015). This recognition allows counties to attain the highest possible standards of health in a manner responsive to the population needs as stipulated in the policy since the available human resources can be used to fast-track prevention, identification and treatment of mental illnesses using evidence-based and current strategies developed for use in LMICs.

1.2 THEORETICAL CONCEPTS

The previous section provides a background of the mental health care among the informal sector in Kenya and other LMICs. In this section, we discuss theoretical concepts in two sections. Section one provides an overview of the informal sector while describing the different providers that encompass the sector such as traditional healers, faith healers and CHWs. In addition, the characteristics of the patients of IHPs like the prevalence of mental illness and quality of life are discussed here. Section two describes the framework for collaboration between formal and informal health providers.

1.2.1: The informal health sector

The informal health sector comprises of individuals who are not part of the formal health and welfare system and is composed of IHPs such as traditional healers, faith healers and CHWs (World Health Organization and World Organization of Family Doctors (Wonca) Organization and Colleges, World Organization of National Academies Physicians, 2008). Although IHPs are not health care

professionals, they form an integral part of the health systems in developing countries and are preferred because of their convenience, affordability, and social and cultural effects (Mbwayo et al., 2013; Sudhinaraset et al., 2013). CHWs are the most visible IHPs since they are involved in activities led by formal health providers while traditional and faith healers, commonly referred to as traditional health practitioners (THPs) operate on their own in providing care to patients.

Each of the mentioned IHPs has been described in detail below;

1.2.1.1 Traditional healers (THs): A TH has been defined as "someone who is recognized by the community in which he or she lives as competent to provide health care by using vegetable, animal and mineral substances and other methods based on the social, cultural and religious backgrounds as well as the prevailing knowledge, attitudes and beliefs regarding physical, mental and social well-being and the causation of disease and disability in the community" (Stekelenburg et al., 2005).

According to Truter (Truter, 2007), THs can be classified into;

a) Diviners who work within the supernatural context with an aim of explaining messages from the ancestral spirits and often try to explain what is assumed to be incomprehensible.

b) Herbalists with extensive knowledge on various types of herbal medications ranging from plants to animal products or a combination of the two products. Some are known to be specialists in treating a particular ailment and therefore receive referrals from fellow healers who at times participate in experiential learning. They mostly do not possess divine powers.

c) Traditional birth attendants are elderly women who are respected for their expertise and ritual practice. Their attention is mostly on pregnancy-related problems and assist women to deliver. However, there have been recent advances in Kenya to allow these women to refer pregnancy-related cases including mental health problems such as epilepsy (Bucher et al., 2016).

THs mainly identify the cause of a problem and who or what caused it using observation, subjective diagnosis from the patient or divination. The treatment modalities are different for each healer and include herbal medication, counseling, making body incisions to drive away evil spirits or physically removing some items from the patient's home, that the healer believes have been strategically been placed to bewitch the patient (Mbwayo et al., 2013).

1.2.1.2 Faith healers: These are religious leaders such as pastors, deacons and priests from churches and imams from mosques. Clients often visit them in churches/mosques or in their homes to seek for solutions to their problems. They use prayers, fasting, biblical interpretation and

sprinkling of holy water, ashes or anointing with oil to treat various ailments (Puckree et al., 2002; Truter, 2007). They also believe that their healing power comes from God. For some denominations, being a faith healer requires formal training while for others it is a calling from God that may or may not be accompanied by short course trainings. Similar to traditional healers, they are also classified under Traditional Health Practitioners (THPs) since they do not employ conventional modes of treatment during care. However, their goal is always directed to improving the well-being of their patients.

They are mostly accepted in health facilities as chaplains to give spiritual nourishment to patients as compared to traditional healers. Although sometimes this is not structured, their interaction with the patients plays an integral role in social integration and reduction of self-guilt.

1.2.1.3 Community Health Workers (CHWs)

CHWs are IHPs who work in communities, are attached to specific health facilities for referral purposes but have some type of formal, but limited training specific to certain tasks and do not receive a formal professional certificate or tertiary degree (Perry et al., 2014). They are instrumental in promoting and assisting individuals to adopt healthy behaviors through conducting outreaches in communities and advocating for communities' health needs (U.S. Department Labor, 2010). In some LMICs, CHWs receive a brief training of 4-12 weeks and assist in case-finding, health education, follow-up, and vaccination campaigns (Ventevogel, 2014).

CHWs in Kenya are commonly referred to as community health volunteers and perform similar tasks as above, through the support of health facilities but are not paid to do so hence the name "volunteers". Their selection is mostly based on the ability to influence the community in a positive way through public speech or a number of successful projects rather than any form of training. A greater input during selection is sought from the Community Health Extension Workers based at the health facilities and from community members (Rachlis et al., 2016). However, the chances of position retention and community acceptance is likely to be reduced if many consecutive community projects fail or if the worker's motive is continuously seen to be contrary to that of community perspective such as favoring some members.

Therefore, CHWs could become an integral part of the health system if trained and supervised and extend service provision while strengthening linkages between communities and health services (Perry et al., 2014). Ventevogel has revealed how training CHWs on mental health led to a

commendable increase in referrals to primary mental health settings (Ventevogel, 2014). Although CHWs do not have offices or shrines to see patients, they are instrumental in conducting home visits and promoting healthy behaviors through linkages with institutions or hospitals. Unlike traditional and faith healers who are classified into the category of THPs, CHWs do not use traditional methods of treatment but rather depend on short trainings provided by sponsoring bodies with a mandate to provide promotive, preventive or curative services to communities.

1.2.2 Collaboration and dialogue between formal and informal sectors

For some individuals in Africa, the only hope for treating mental disorders is visiting a THP since patients assume that the manifestation of these symptoms are as a result of a spell or curse and needs to be cast out. This calls for the need to strengthen these channels of care through establishing collaboration with the formal sector. Whereas there are barriers to establishing this collaboration due to the different treatment modalities and beliefs, there exists mechanisms that can be followed to promote understanding, respect and mutual trust rather that running parallel programmes that may lead to redundancy and compromise the quality of care of the disadvantaged populations in remote settings.

Firstly, it is of essence to understand what constitutes and influences the collaboration in order to facilitate the achievement of goals that cannot be reached when individual professionals act on their own (Bronstein, 2003). Secondly, research has shown that trust among health providers is an important concept that needs to be developed before initiation of collaborative processes since it is unrealistic to assume that bringing health providers together will automatically lead to collaboration (D'Amour et al., 2005). This trust develops through frequent and meaningful interaction where individuals learn to feel comfortable while sharing ideas without fear of the consequences (Holton, 2001). Consequently, dialogue that aims at clarifying viewpoints and developing solutions to emerging issues is formed (U.S. Department of Justice, 2003).

Therefore, collaboration between the formal and the informal sectors should be prioritized as IHPs provide a significant mental health service to most disadvantaged populations and taking a different route would be a disservice to patients and to the health profession as a whole (Robertson, 2006). It is also intended that the collaboration processes will serve the needs of patients as whole persons and their families, by first addressing the totality of the patient's relational existence such as physical, psychological, social, and spiritual (Sulmasy, 2002) that are at play for patients experiencing serious illnesses (Richardson, 2014).

The multidisciplinary care model that tackles physical, psychological and social aspects of the patient is utilized by formal health providers in health facilities who are still few due to the national shortage of human resources. On the contrary, IHPs particularly faith healers have been shown to mostly provide spiritual care to patients suffering from mental disorders (Leavey and King, 2007). Therefore, collaboration will provide an opportunity for IHPs to provide holistic health care for patients with mental health problems and consequently reduce the issue of inadequate mental health specialists.

1.2.2.1 Biopsychosocial-spiritual model

The framework below illustrates the interaction between the intrapersonal and extrapersonal relationships that can be addressed for not only terminally ill patients but also for those at various stages of care since illness disturbs the inside and the outside of an individual. The disturbances within the body of an individual involve relationships between the various body parts as well as relationships between the body and mind. The extrapersonal factors include relationships between the individual and the physical and interpersonal environment, and his/her relationship with the transcendent (Sulmasy, 2002).

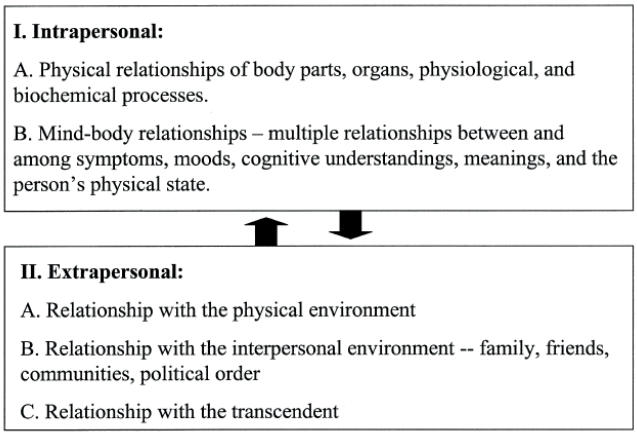

Figure 1.1 Illness and the manifold of relationships of the patient as a human person (Sulmasy, 2002)

Although this is not the focus of this research, understanding spirituality is important since it contributes to an individual's wellbeing and quality of life. The model below, adapted from the

biopsychosocial-spiritual model of the care of dying persons summarizes a framework for various interactions, in this case trying to understand spirituality as evident among IHPs services and how inclusion of psychosocial interventions among patients with mental disorders affect their quality of life. When a patient presents to an IHP with biopsychosocial history such as symptoms of illnesses and spiritual history such as religious coping, a state of spiritual well-being, and other spiritual needs, both biopsychosocial and spiritual states modulate each other. Then after an intervention, the substrate of the construct called quality of life is constituted by how the patient feels physically, psychologically, interpersonally and spiritually (Sulmasy, 2002).

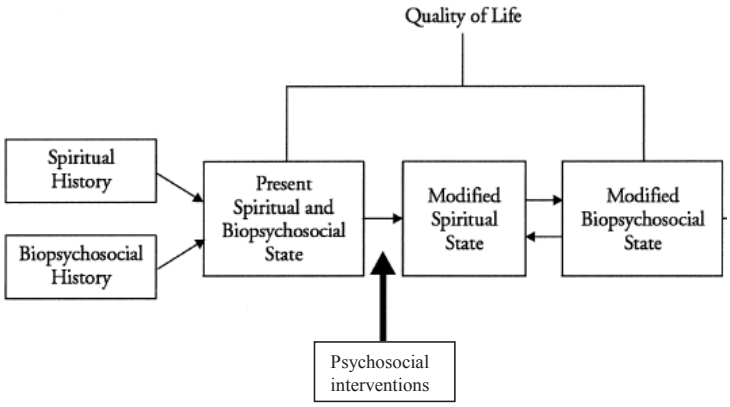

Figure 1.2 Adapted biopsychosocial-spiritual model (Sulmasy, 2002)

1.2.2.2 Quality of life

A detailed assessment of quality of life measures the effects of health using different aspects such as the ability to function physically, socially and daily roles, freedom from bodily pain, the subjects' perception of general and mental health (Spitzer et al., 1995). It could be measured subjectively in terms of wellbeing, life-satisfaction and happiness or objectively using social functioning such as employment and living standards (Bigelow et al., 1991). Overall, satisfaction and role performance are central to defining quality of life, where satisfaction could mean absence of distress or symptomatology (Oliver et al., 1996).

Quality of life measurements have been positively regarded by patients and relatives as they find the assessments to be intrinsically empowering and therapeutic because they touch on important areas of their life (Oliver et al., 1996). In terms of research, quality of life data can be used as

descriptive indicators in epidemiological studies, as outcome measures and helps in planning for the location of community mental health services (Barker, 1998; Oliver et al., 1996). Despite this recognition, evaluating quality of life is not considered a priority in low-resource settings due to low budget allocation. The situation is even worse for IHPs such as THPs who are preferred by low income earners in rural areas but have neither formal training nor resources to assess for quality of life measures. However, brief evaluative measures can be employed thus overcoming worker and management resistance to evaluating programs (Oliver et al., 1996) and inform decision making for IHPs.

The importance of these measures is increasingly growing in the field of mental health due to substantial impairments of the disorders notably depression on quality of life. In most cases, the impairments are equal or greater to those seen in other chronic illnesses (Rapaport et al., 2005). For instance, the disability caused by depression exceeds that due to all forms of cancer and diabetes mellitus combined, as well as that due to strokes and hypertensive heart diseases (Reddy, 2010). It is therefore important to acknowledge that a better quality of life outcome for people with priority mental disorders has a large impact on the individual as well as their families or caregivers who shoulder some burden in caring for the mentally ill. The reduction of this burden leads to increases in health service appreciation. As such, understanding the concept of quality of life for the mentally ill provides an opportunity to focus interventions that would tackle both their mental health and quality of life needs.

Similarly, exploring screening and prevalence concepts are required to identify characteristics of individuals in order to study quality of life aspects as detailed below.

1.2.2.2.1 Screening of IHPs patients

Screening is the "systematic application of a test or enquiry to identify individuals at risk of a specific disorder to warrant further investigation or direct preventive action, amongst persons who have not sought medical attention on account of symptoms of that disorder" (Wald, 2001). It is important for assessing the risk factors and early identification of illnesses (Elliott et al., 2009). Through screening, the estimates of disease prevalence are measured.

1.2.2.2.2 Prevalence

Prevalence is the proportion of people having or who have had a specific characteristic such as an illness, a condition, or a risk factor such as depression or smoking in a given time period. It is reported as a percentage or as the number of cases per 10,000 or 100,000 people, depending on how common the illness or risk factor is in the population.

It can be measured as point prevalence (at a specific point in time), as period prevalence (any point during a given time period of interest) or as lifetime prevalence (ever had the characteristic at some point in time) (National Institute of Mental Health, 2016). At times, the prevalence of a condition is reported with its determinants in order to identify factors directly or indirectly exacerbating the problem. Such factors include the socio-demographic, economic and cultural aspects of an individual. This is important in order to tailor interventions to meet the needs of populations in different regions.

1.2.2.3 Promoting continuity of care in mental health among the informal sector

Continuity of care is often directed towards the formal sector. However, the increased exigent demand of mental health services in LMICs requires the use of the readily available useful resources. Recent literature has shown that it is vitally important to use a 'bottom-up approach' in order to promote inclusion of various actors within communities and facilitate mental health initiatives (Ventevogel, 2014). Although educational interventions such as capacity-building training programs has been listed as the top-most cited recommendations for engaging IHPs (Sudhinaraset et al., 2013), continuity of care could also be maintained by strengthening referral systems to increase access to quality care.

1.2.2.3.1 Referral of patients

Referral as used in the thesis refers to a way of directing patients suspected to have mental disorders to higher levels of care. Notwithstanding the many studies on collaboration, it is crucial to understand that the willingness to collaborate does not necessarily equate to successful referral of patients (Sorsdahl et al., 2010). Therefore, when implementing projects that are underpinned by collaboration, it is important to identify challenges related to referral practices that may or may not necessarily be a product of the collaborative process.

Furthermore, encouraging IHPs to refer patients with mental disorders is a potential option to reducing treatment delay (Sorsdahl et al., 2010) since self-referral to health facilities has been associated with higher socio-economic status (Katz et al., 2007). It is also important to note that most people in the rural areas work informally and are only paid for work done. Therefore, a clinic visit through self-referral and for conditions that do not manifest with bodily symptoms is not considered a priority but is rather associated with wage loss.

On the contrary, patients prefer to pay for these services at the THPs because they feel their conditions are attributed to a certain cause. For instance, mental health problems in many African countries are perceived to be due to bewitchment or ancestral spirits and THPs are assumed to have the expertise to address these needs (Sorsdahl et al., 2009). Therefore, using IHPs as referral channels through capacity building could contribute to reduction of the mental health treatment gap inherent in LMICs.

Chapter 7 discusses the importance of continuous follow-up of IHPs after training them on how to detect and refer patients with suspected mental disorders for treatment, in order to identify any task-sharing challenges and internally suggested strategies to promote competency in practice and continuity of care.

1.2.2.3.2 Quality care

Quality care is defined using two domains such as technical care that involves the application of science and technology medicine for the management of individual problems, and interpersonal care that uses socio-psychological aspects of the interaction between the physician and the patient (Cleary and McNeil, 1988). Over the past decades, the interest in quality of care has been on the rise with a focus on aspects of accessibility, continuity, appropriateness, efficacy and safety in mental health disorders (Fantini et al., 2016).

Various new models have also emerged to improve the quality of care delivered by IHPs and other non-specialists in LMICs. An example is the mental health Global Action Program Intervention Guide (mhGAP-IG) that was developed through an intensive process of evidence review involving a group of various international experts and distributed among a wider range of reviewers across the world to include all the diverse contributions (World Health Organization, 2010). It tackles priority mental disorders and has been used extensively in East Africa (Ayano et al., 2016; Chisholm et al., 2016; Kisa et al., 2016), other low and middle income countries such as Nigeria (Gureje et al.,

2015a), Liberia, Nepal (Kisa et al., 2016), Philippines (Budosan et al., 2016) and middle income countries including India and South Africa (Chisholm et al., 2016).

Evidence-based practice through implementation of appropriate interventions is crucial to improving the processes of health care and promoting the delivery of quality care in terms of patient health outcomes and safety of health care (Dua et al., 2011). Irrespective of these positive impacts, previous work in Kenya has not prioritized the use of new and recommended mental health models to improve evidence-based practice, defined as "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients by integrating individual clinical expertise with the best available external clinical evidence from systematic research" (Sackett et al., 1996).

Chapters 5 and 6 of the current research addresses the use of evidence-based practice in mental health using a model intervention guide recommended for use among non-specialists in LMICs. Patient health outcomes related to this intervention are measured at different time points.

1.3 RESEARCH DESIGN

This thesis consists of three parts that are used to answer the main question that relates closely to THPs as opposed to CHWs who have some relationship and guidance from the formal sector but lack formal training, hence their involvement in this research.

1.3.1 Research questions

The main question is formulated as follows;

Under what conditions can collaboration between formal and informal health providers take place?

The question is derived from the theoretical framework described in the previous section. It illustrates the processes involved to form long-term relationships between formal and informal health providers, for continuity of care. To answer this question, we developed five study-level questions and divided them into three parts. Part one describes the characteristics of patients seeking care from IHPs while looking at the prevalence and determinants of priority mental disorders such as depression and establishing the association between quality of life domains and mental illness. Evidence suggests that it is important to first gather epidemiological data, especially if there is little existing empirical data in order to guide any form of intervention.

Part two focuses on the barriers and options for collaboration between formal and informal health providers while developing a constructive dialogue between the two sets of providers. Lastly, part three discusses training of IHPs to provide quality care and follow-up for patients suffering from mental disorders; and making appropriate referrals for patients with suspected mental disorders.

We hypothesize that all these processes are of essence to achieving mental health outcomes and enhancing continuity of care in the informal sector in Kenya and other similar LMICs. As a result, the framework below illustrates how these concepts are interrelated.

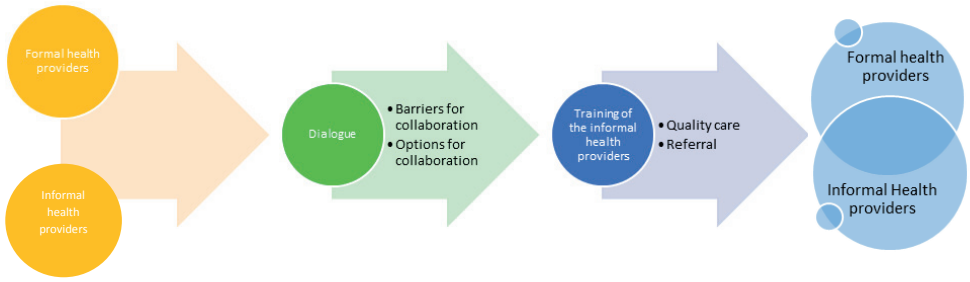

Figure 1.3 Framework for collaboration between the formal and informal sectors

From the previous section, little is known about the mental health and quality of life of patients seeking care from IHPs such as THPs. We first need to garner information about these issues and find out if there are opportunities for collaboration. This is important in order to identify areas that warrant attention for provision of quality care, and ensure that the interventions and evaluations identified focus on both the illness and patient-centered outcomes. As a result, we developed this first sub-question in part one, that uses prevalence and screening as key concepts;

1. What are the characteristics of patients seeking care from Traditional Health Practitioners (THPs)?

It is clear from the above question that the identification of characteristics for THPs' patients requires approaches to promote quality care. Given the lack of formal training and parallel operation for THPs in spite of available interventions and mental health specialists, we need to find out if there are barriers and options for collaboration between the formal and informal health providers before initiation of any dialogue discussions. This exploration in the Kenyan context

could be the road to the provision of appropriate approaches by IHPs without causing any tension. In order to make sense of the collaboration process, we developed the following sub-question;

2. What are the barriers and options for collaboration between the formal and informal health providers?

Finally, it is important to increase access for rural populations particularly for those seeking care from IHPs. One of the ways would be to improve the quality of care provided to the patients through the use of evidence-based interventions, so that patients within communities access services that address their needs. Secondly, training the IHPs to refer patients suspected with mental disorders while identifying the challenges and solutions associated with referral practices after training is crucial for continuity of care. Many programmes as mentioned in the previous sections do not follow-up IHPs after training and this may demoralize them on realization that the challenges they face during practice are not discussed and resolved. This could also slow down the process of collaboration thus making all efforts at the final stages futile. Therefore, this stage is the most delicate in promoting continuity of care and provides an opportunity to explore this area using the following research sub-question;

3. To what extent does quality care training and follow-up of IHPs improve the mental health outcomes of their patients, and promote continuity in mental health care?

1.3.2 Research approach

The research sub-questions are discussed using mixed methods approach that combines both qualitative and quantitative techniques. Qualitative approaches are important as they explain the experience and interpretation of events by individuals or groups with various stakes and roles and give voice to those who are rarely heard (Sofaer, 1999). As such, this technique is used in chapters 4 and 7 as we explore barriers and options for collaboration, and referral challenges respectively.

Quantitative measures were also applied while estimating prevalence and quality of life estimates as well as assessing mental health outcomes at different time points. Prevalence estimates as described under theoretical concepts are calculated using sample representatives with certain characteristics and reported as percentages or as number of cases per 10,000 or 100,000 people. These measurements are better performed using quantitative techniques.

1.3.2.1 Research sub-questions

For each sub-question, there were study-level questions that were developed. Table 1 provides a visual illustration on the various questions used in this thesis.

Table 1: An overview of the research and corresponding study questions used in the thesis

Research sub-questions	Study-level questions	Type of IHP involved	Study type	Chapter
What are the characteristics of patients seeking care from traditional health practitioners (THPs)	What is the prevalence, determinants and comorbidities of major depressive disorder among patients seen by THPs in rural Kenya?	THPs	Quantitative	two
	How does the quality of life of depressed and suicidal patients differ from non-depressed and non-suicidal patients seeking mental health services from THPs in rural Kenya?	THPs and CHWs	Quantitative	three
What are the barriers and options for collaboration between the formal and informal health providers?	What are the barriers for collaboration between the formal and informal health providers?	THPs	Qualitative	four
	What is the potential for collaboration between formal and informal health providers and how should it be promoted?	THPs	Qualitative	four
To what extent does quality care training and follow-up of IHPs improve the mental health outcomes of their patients, and promote continuity in mental health care?	To what extent does training IHPs on evidence-based care lead to mental health outcomes among patients	THPs and CHWs	Quantitative	five
	To what extent does quality of life improve among patients receiving interventions for depression?	THPs and CHWs	Quantitative	six
	What are the challenges and opportunities associated with trained IHPs while referring patients with suspected mental disorders for conventional treatment	THPs and CHWs	Qualitative	seven

1.3.2.1.1 Research sub-question 1

The first study question was guided by two studies that addressed the characteristics of patients seeking care from THPs.

Study 1: Prevalence of depression among THPs' patients

This study used a quantitative approach to determine the prevalence of depression among patients seen by THPs. Depression is a priority mental disorder and is one of the top-three causes of disability worldwide except in Asia-Pacific (ranked fourth), as it increases the risk for many chronic illnesses such cardiac illness, diabetes and hypertension (Institute for Health Metrics and Evaluation, 2013; Reddy, 2010). It also causes more impairment in occupational and interpersonal functioning in comparison to several common medical illnesses, and is associated with high suicidality (Reddy, 2010).

However, there is paucity of epidemiological data on depression among THP patients and not much is known about these patients, particularly in rural areas in Kenya. Results from this study are expected to provide insights to the burden inherent in the informal sector in order to explore opportunities for bridging the huge mental health treatment gap in developing countries. Therefore, this study aimed at estimating the prevalence and determinants of depression among THP patients in rural Kenya by responding to the study-level question below;

What is the prevalence, determinants and comorbidities of major depressive disorder among patients seen by Traditional Health Practitioners in rural Kenya?

Study 2: Quality of life and mental illness: IHP perspectives

Although patients sought care from THPs, data from this study was garnered quantitatively by CHWs. Quality of life is an important concept that provides an indication of an individual's subjective well-being in relation to their socio-cultural context and value systems (Muldoon et al., 1998; World Health Organization, 1996). While the earlier study sheds more light on a priority mental disorder, its determinants and comorbidities such as suicidal behaviour, there is still relatively little information known about the quality of life of individuals seeking care for mental illness among THPs. Data on quality of life can demonstrate the burden of depression, help in early

detection of individuals at risk for depression and suicide, and evaluate the effectiveness of depression services and suicide prevention in communities (Friberg and Melin, 1996; Lynch et al., 2016; Min and Min, 2015). Furthermore, understanding the factors that are related to quality of life in depressed and suicidal patients is crucial for the development of public health policies that can improve overall health outcomes hence the study-level question below;

How does the quality of life of depressed and suicidal patients differ from non-depressed and non-suicidal patients seeking mental health services from THPs in rural Kenya?

1.3.2.1.2 Research sub-question 2

To answer this question, we used a mixed methods approach. This section discusses key approaches to successful inclusion of IHPs in mental health service provision.

Study 3: Setting the pace: Forming a joint dialogue

We qualitatively explored the barriers and potential for collaboration between formal and informal health providers and quantitatively evaluated one of the products of collaboration known as dialogue. Both formal and informal health providers have been shown to have the willingness to strengthen collaboration, however there are gaps such as lack of collaborative framework in health care (Kaboru et al., 2006). As such, the following study-level question was used to partly address research sub-question 2.

What are the barriers to collaboration between the formal and informal health providers?

Moreover, in order to promote a feasible relationship between the two systems, it is crucial to build trust by making initial contact with the different practitioners as they historically have a greater antipathy towards each other, organizing events to present the objectives of the collaborative initiative, planning programmes and reaching conclusions together with participating formal and informal health care providers (King, 2000). Therefore, exploring options for collaboration could be a starting point to promoting trust. This prior recommendation from literature led to the following study-level question;

What is the potential for collaboration between formal and informal health providers and how should it be promoted?

1.3.2.1.3 Research sub-question 3

The next steps involve putting into practice the potential opportunities to enhance continuity of care. In this process, outcomes were measured at the patient level and progress assessed at the health provider level. Three studies emerged from this sub-question.

Study 4: Mental health outcomes

The interest in this longitudinal study originated from the inherent aspects of accessibility and affordability of IHPs, yet more than 90% of the patients do not either benefit or demonstrate a change in any direction (Phang et al., 2010). It was conducted to quantitatively measure changes in mental health outcomes over time after provision of evidence-based interventions. The following study-level question was developed to address the aim of this study.

To what extent does training the IHPs on evidence-based care lead to mental health outcomes among patients?

Study 5: Quality of life outcomes in mental illness

There is a recognition that quality of life is an important measure used to monitor therapy progress (Friberg and Melin, 1996; Sainfort et al., 1996). As a result, its improvement is seen as a major goal in the provision of mental health services (Sainfort et al., 1996). It is therefore essential to study changes in quality of life of patients suffering from mental disorders such as depression in order to ascertain the far-reaching outcomes of the intervention delivered by THPs. To address this, the following study-level question was developed;

To what extent does quality of life improve among patients receiving treatment for depression?

Study 6: Referral challenges and opportunities: promoting continuity of care

Finally, it was important to promote continuous follow-up of IHPs after introduction of a task-sharing model. Despite collaborative efforts in earlier initiatives, little is known about the challenges that IHPs face as they become trained to function in a system that addresses mental health needs. The further exploration of challenges faced by these IHPs during collaboration and identifying opportunities to overcome these challenges is thus an important next step in research. The study-level question below delved into these processes with an aim of identifying measures that can be put in place to promote referrals beyond the project scope.

What are the challenges and opportunities associated with trained IHPs while referring patients with suspected mental disorders for conventional treatment?

1.3.3 Methods

This section describes the study location and participants involved in the research work discussed in this thesis and the approaches used to collect and analyze data for each of the studies.

1.3.3.1 Study location and participants

The study took place in Makueni County, located in the arid and semi-arid zones of the Eastern region of Kenya (Makueni County, 2013). This county has a population of 0.9 million and experiences reduced agricultural production due to drought resulting into environmental degradation (Makueni County, 2013). The participants included IHPs such as CHWs, THPs and their patients. The selection of the IHPs was based on registration by an association for traditional healers, affiliation to a place of worship for faith healers and to a health facility for CHWs. Proximity to health facilities where health care workers could appropriately provide mental health interventions based on prior training was also a criteria used to select the IHPs. This was crucial in order to facilitate referral of patients with complicated cases of depression and suspected cases of mental disorders.

The first study in the thesis used quantitative approach to assess the prevalence of depression for patients seeking care from THPs. Traditional and faith healers screened a total of 1515 and 2566 patients for depression respectively. The mean patient age was 45 years (range 18 to 95 years) with a standard deviation (SD) of 16 years. In order to determine the measure of accuracy of THPs screening, a mental health professional (psychiatric nurse) confirmed referred cases from THPs, using DSM-IV guidelines (reference standard). Binary logistic regression was used to generate odd ratios (ORs) and the corresponding 95% confidence intervals (CIs) for all significant variables derived from the chi-square tests. Sensitivity, specificity, positive and negative predictive values were estimated using Fisher's exact test to determine the accuracy of THP screening and a Receiver Operating Characteristic (ROC) analysis used to estimate the Area Under Curve (AUC).

Study two used a similar approach, but provided insight on the quality of life of depressed versus non-depressed patients. However, only patients who agreed (n=443) to be screened by a CHW were included in this study. Independent sample t-tests and Chi-square test of independence were run to determine if there were significant group differences between depressed and non-depressed

participants on socio-demographic variables. Pearson's correlation coefficient was performed to determine correlations between scores on the assessment tools.

Study three used mixed methods approach to explore THPs' perceptions on mental illness, barriers and options for collaboration. This was important in order to identify factors that influence and facilitate collaboration among the formal and informal health providers. Eight Focus Group discussions (FGDs) each consisting of 8-10 participants and lasting between 40 minutes to one hour were conducted in two phases (summarized in table 1 below).

Table 1: Outline of practitioners' FGDs

Phase	Type of practitioner	Number of FGD/ Discussions	Aim
Phase one	Traditional healers	Two	To discuss practitioners' perceptions on mental illness, causes and management
	Faith healers	Two	
	Clinicians	Two	
Phase two	Traditional healers and clinicians	One	To reduce mistrust, enhance respect and address any barriers inherent during referrals between the formal and the informal sectors
	Faith healers and clinicians	One	
Evaluation of dialogue formation phase	Traditional healers, faith healers and clinicians	Evaluation of dialogue formation discussions	To evaluate the process of dialogue formation

The first phase involved independent discussions with each group of traditional healers, faith healers and clinicians (registered nurses and clinical officers with a diploma in nursing and clinical medicine respectively) about their perceptions on mental illness, causes and management and the need for collaboration. The separate discussions that consisted of two FGDs per group were held to identify barriers within each group of practitioners.

In phase two, separate FGDs (two) were conducted. The first FGD consisted of 5 traditional healers and 4 clinicians while the second consisted of 5 faith healers and 4 clinicians. This was crucial in order to reduce or alleviate mistrust, enhance respect and address any barriers inherent during

referrals between the formal and the informal health providers. The number of FGDs was predetermined at the beginning, however, the saturation was nearly reached at the end of phase one especially during the second set of FGDs when barriers and solutions were similar across the practitioners.

In a separate forum, evaluation of dialogue formation was performed quantitatively among 30 randomly selected participants from each set of practitioners (9 clinicians, 9 faith healers and 12 traditional healers) using a questionnaire containing questions on ensuring community dialogue or collaboration.

Thematic content analysis that involved line by line coding by two independent researchers was used. Open coding without any predetermined information on the codes was used but excluded any deviations from the topic of discussion. All emerging themes were selected by a team of researchers, similar categories grouped together and any duplicates crossed out.

Study four used a quantitative approach to determine depression outcomes at 6 and 12 weeks from the initial assessment, among patients seeking care from THPs. A total of 377 patients that were screened positive for mild to severe depression by a CHW were included. The outcomes were based on provision of psychosocial interventions such as cognitive behaviour therapy or problem solving, describing in detail what to do as listed under mhGAP-IG in the depression component (World Health Organization, 2010), at the initial contact and one or two subsequent visits, depending on the severity of symptoms. Paired sample t-test was conducted for pair-wise comparisons across the 3 time points. Moreover, a repeated measure Analysis of Variance (ANOVA) was performed to graphically determine the change in depression scores over the three time period.

Study five used a similar approach used in study four but the measurements to determine changes in quality of life indices at different time intervals were based on the World Health Organization Quality of Life-BREF (WHOQOL-BREF). Only participants who scored above 11 (at least minimal depression or mild mood disturbance) on the depression scale at baseline were included. This was important in order to estimate the effects of psychosocial interventions on quality of life for both clinical and subclinical depression. As such, the baseline sample included 396 participants. One-way repeated measures ANOVA were used to determine changes in depressions scores, and quality of life domains at baseline, 6 weeks, and 12 weeks.

Finally, study six used a qualitative approach to explore IHPs' views about the challenges they face during practice, after being trained on how to screen and refer patients with suspected mental illness to health care facilities. Initially, a total of nine FGDs (three for traditional healers, three for faith healers and three for CHWs) each consisting of eight to ten participants were conducted. However, a fourth FGD for CHWs was conducted to achieve saturation of all new information since it is not possible to pre-determine the sample size for qualitative studies (Morgan, 2013). Data was analyzed using a thematic content analysis approach (Green & Thorogood, 2004) and included analyst triangulation throughout the analysis process (Lincoln & Guba, 1985).

Research team

The research team involved mental health researchers from Africa Mental Health Foundation (Kenya), Vrije Universiteit (Netherlands), Columbia University (USA) and Harvard Medical School (USA). The author was the Principal Investigator (PI) for the research work outlined in chapters 2 to 6 and a member of the research team for chapter 7. She was also extensively involved in writing the articles among other research team members.

1.3.4 Validity of results

Various strategies have been employed in the current research to reduce bias and enhance the validity of both quantitative and qualitative data.

Validity of quantitative data

We related our research to previous work conducted in similar settings with particular citation to more relevant and recent studies in order to conform to external validity. Baseline and follow-up assessments for each patient were also carried out by the same IHPs where necessary, for generalization purposes and also to ensure consistency of findings.

Validation of qualitative data

To enhance generalizability, FGDs were conducted until saturation of new themes was achieved. Although convenience sampling was used for this study, there was geographical diversity and only THPs that were registered under an association or CHWs attached to a health facility were considered. This is important for the informal sector in order to promote uniformity since those that are registered are regulated by an act that does not allow malpractice. As such, introducing the evidence-based practice to already registered providers puts the patients and other formal sectors at ease and could encourage integration of the IHPs into the formal health system in future studies.

The research work was approved by registered Institutional Review Boards (IRB) in Kenya. For chapters 2 to 6, ethical approval was obtained from the Kenyatta National Hospital/University of Nairobi Ethics Review Committee while Maseno University Ethics Review Committee (MUERC) approved the research work outlined in chapter 7. All participants were explained the procedures, confidentiality measures, risks and benefits associated with the study and provided a written consent before participation in the study.

1.4 Outline of thesis

The first section of this thesis provides a background of the current situation including the existing gaps in mental health care and in the informal sector. It also discusses the theoretical concepts as applied in the thesis and the research design while outlining the research sub-questions and study-level questions.

Chapters two and three address the prevalence of depression and the quality of life of depressed patients among THP patients respectively. These studies have been published in peer-reviewed journals.

In chapter four, we focus on exploring the barriers and possibilities for collaboration between formal and informal health providers. This study has been published in an open access and impact-rated journal.

Chapter six entitled "Mental health outcomes of psychosocial interventions among traditional health practitioner depressed patients in Kenya" demonstrates that it is possible to measure mental health outcomes of patients seeking care from IHPs. The study has been published in a mental health-related and impact-rated journal.

Chapter seven discusses the effects of mhGAP-IG psychosocial interventions for depression on quality of life among patients accessing the care of THPs. This article is under review in an open access and impact-rated journal.

Chapter 8 explores the challenges faced by trained IHPs referring patients with suspected mental disorders for further treatment, and potential opportunities to counter these challenges. The article has been published in a peer-reviewed open-access international journal.

Finally, chapter 9 provides the general discussions and conclusion for the research work. It aims at answering the main question, the sub-questions and the study-level questions while outlining recommendations for future research.